

Carolyn Ann Larabell

- 👤 **Professor and Vice Chair of Anatomy**, University of California San Francisco
1550 4th St., 348-C Rock Hall, San Francisco CA 94158; (415) 514-0423
Carolyn.Larabell@ucsf.edu
- 👤 **Director, National Center for X-ray Tomography**
NIH-DOE Biomedical Technology Research Center
<http://ncxt.lbl.gov>
- 👤 **Advanced Light Source Professor**, Advanced Light Source, Lawrence Berkeley National Laboratory
1 Cyclotron Rd, 6R2138, Berkeley CA 94720 (510) 486-5890
CALarabell@lbl.gov
- 👤 **Faculty Scientist**, Molecular Biophysics & Integrated Bioimaging
Lawrence Berkeley National Lab
1 Cyclotron Rd, 6R2138, Berkeley CA 94720 (510) 486-5890
CALarabell@lbl.gov

Education

University of California Davis. Postdoc in Biochemistry & Biophysics (1990)

Stanford University. Postdoc in Neurobiology (1989)

Arizona State University. Ph.D. in Cell Biology (1988)

Arizona State University. B.S. in Zoology (1981)

Michigan State University. B.A. in Business Administration (1979)

Professional Positions - Current

2015-	Vice Chair, Dept. Anatomy, University of California San Francisco	San Francisco, CA
2004-	Professor, Dept. Anatomy, University of California San Francisco	San Francisco, CA
2004-	Director, National Center for X-ray Tomography , NIH-NIGMS Biomedical Technology Research Center at the Advanced Light Source, Berkeley Lab	Berkeley, CA
2003-	Faculty Scientist, Physical Biosciences Division, Lawrence Berkeley National Laboratory	Berkeley, CA
1999-	Advanced Light Source Professor, Lawrence Berkeley National Laboratory	Berkeley, CA

Professional Positions - Past

2000-2004	Associate Professor, University of California San Francisco	San Francisco, CA
-----------	--------------------------------------------------------------------	-------------------

2000-2003	Faculty Scientist, Life Sciences Division, Lawrence Berkeley National Laboratory	Berkeley, CA
1997-2003	Group Leader, Innovative Microscopies, Lawrence Berkeley National Laboratory	Berkeley, CA
1990 - 2000	Staff Scientist, Life Sciences Division, Lawrence Berkeley National Laboratory	Berkeley, CA

Awards and Distinctions

2013	Distinguished Alumna Award, Arizona State University
2012	Gordon and Betty Moore Foundation Award
2010	Outstanding Lecturer Award, Pacific Northwest National Laboratory
2003	Department of Defense Breast Cancer Research Program Innovatory Award
1999	Keith R. Porter Fellowship
1997	Outstanding Performance Award, Lawrence Berkeley National Laboratory

Professional Activities

Society Memberships

2009-	American Chemical Society
2003-	International Society of Differentiation
2003-	Biophysical Society
1990-	Microscopy Society of America
1998-	Society for Developmental Biology
1985-	American Society for Cell Biology

Scientific Advisory Boards

2004-2015	Scientific Advisory Committee, Biophysics Collaborative Access Team, Argonne National Laboratory
2012-2015	Scientific Advisory Board, National Synchrotron Radiation Research Center, Hsinchu Taiwan
2010-2013	Scientific Advisory Committee, Stanford Linac Coherent Light Source
2010-2011	Scientific Advisory Committee, University of Chicago's Argonne National Laboratory Advanced Photon Source
2009-2011	Scientific Advisory Committee, National Center for Microscopy and Imaging Research, NIH Biomedical Technology Research Center
2009-2010	Scientific Advisory Committee, INSTRUCT: Integrated Structural Biology Infrastructure for Europe
2008-2010	Dean's Advisory Committee, University of Wisconsin Madison Synchrotron Radiation Center

2005-2008	Scientific Advisory Committee, Advanced Light Source, Lawrence Berkeley National Laboratory
2005	National Academies of Sciences Study of Revealing Chemistry through Advanced Imaging Technologies
2004-2005	Scientific Advisory Board, NSF Engineering Research Center in UV Science
1999-2002	Executive Committee, Advanced Light Source, Lawrence Berkeley National Laboratory

Service to Professional Organizations

2015-2016	Organizing Committee, International Biology and Synchrotron Radiation Conference, Stanford University
2015	Session Chair, EMBL-EMBO ' <i>Seeing is Believing: Imaging the Processes of Life</i> ', Heidelberg Germany
2014-2015	Organizing Committee, Industrial Physics Forum on Mesoscale Science and Technology, San Jose CA
2013	Session Chair, EMBL-EMBO ' <i>Seeing is Believing: Imaging the Processes of Life</i> ', Heidelberg Germany
2012-2013	Session Chair and Organizer, International Biology and Synchrotron Radiation Conference, Hamburg Germany
2008-2009	Organizing Committee, International Congress on Biology and Synchrotron Radiation, 'Medical Applications of Synchrotron Radiation', Melbourne AU
2006	Session Co-Chair, 4th International Conference on Electron Tomography
2005	Program Committee Member, Photonics West Biomedical Optics Society Symposium
2004	Session Co-Chair, Advanced Light Source Users Organization, Lawrence Berkeley National Laboratory
2004	Program Committee Member, International Society for Optical Engineering, SPIE, ' <i>Colloidal Quantum Dots for Biomedical Applications</i> '
2003	Imaging Symposium Organizer, International Society of Differentiation
2003	Session Chair, California Institute for Quantitative Biomedical Research Imaging Symposium, University of California Berkeley
2002	Symposium Chair, International Conference on X-ray Microscopy
2002	Meeting Organizer, West Coast Society for Developmental Biology
2002	Vice Chair, Developmental Biology Gordon Conference
2000-now	Workshops at the Advanced Light Source Users meeting and at the National Center for X-ray Tomography

Editorial Boards

2008-	Journal of Structural Biology
2000-	Differentiation
1992-2004	Microscopy Research and Technique

Journal Reviews

Biochemistry, Biophysical Journal, Cell, Developmental Biology, Developmental Cell, Journal of American Chemical Society, Journal of Microscopy, Microscopy and Microanalysis, Nanoletters, Nature, Nature Biotechnology, Nature Materials, Nature Methods, PNAS, J. Royal Society Interface, Science, Ultramicroscopy

Peer Review

2002-now	NCRR, NBIB and NIGMS Site Visit reviews of Biomedical Technology Research Centers (17 panels; Chair of 3)
1998-now	NIH Special Interest Study Sections (minimum 1/year)
2015	NIH SBIR/STTR Study Section
2014	NIH High-End Instrumentation Study Section
2011-2014	NIH-NIGMS Technology Development Study Section
2010-2013	Danish Agency for Science, Technology and Innovation
2010-2012	Swiss National Science Foundation
2010-2012	NIH College of Reviewers
2012	NIH Young Innovator Award Study Section
2012	NIH ACTS Study Section
2012	Medical Research Council, England
2011	National Science Foundation
2010	Czech Science Foundation
2001-2010	Proposal Review Panel, Synchrotron Radiation Center, University of Wisconsin, Madison WI
2009-2010	NIH-NCRR Technology Development Study Section
2009	NIH Challenge Grants
2009	NIH-NIBIB Special Study Section
2007-2009	Chair , NIH Microscopic Imaging Study Section
2007-2009	Proposal Review Panel, National Synchrotron Light Source, Brookhaven NY
2007	NIH Study Section, GCMB
2007	DOE INCITE program
2005-2007	NIH Microscopic Imaging Study Section
2005	National Academies of Sciences Study on Revealing Chemistry through Advanced Imaging Technologies
2002-2004	NIH Imaging Technology Development Study Section

Invited Presentations (2000-present)

2015

- SIAIS Bioforum, 'Advances in Integrative Biology of Cellular Processes', Shanghai China
- Seminar, Academia Sinica, Taipei Taiwan
- Seminar, National Health Research Institutes, Hsinchu Taiwan

- John Lawrence Seminar, Lawrence Berkeley National Laboratory
- EMBO-EMBL 'Seeing is Believing: Imaging the Processes of Life', Heidelberg Germany
- NSLS-II Strategic Planning Workshop, Brookhaven National Laboratory
- Asia-Pacific Hercules (Hercules-France, School of Neutrons & Synchrotron Radiation for Science)
- Cold Spring Harbor Single Cell Analysis Course
- 40th Lorne Conference on Protein Structure and Function, Lorne Australia
- 2nd Symposium on Single Cell Biology, Perelman School of Medicine, University of Pennsylvania
- Seminar, Department of Physics, University of California Santa Cruz

2014

- NCI-NIH Workshop, 'Multi-Scale Imaging for Integrative Cancer Biology', MD Anderson Cancer Center, Houston TX
- Cold Spring Harbor Laboratory Meeting, 'Nuclear Organization and Function' NY
- Keynote Speaker, International Workshop on EUV and Soft X-ray Sources, Dublin Ireland
- Cold Spring Harbor Laboratories Meeting, 'Nuclear Organization and Function' NY
- Seminar, Department of Biochemistry and Molecular Biology, Baylor College of Medicine, Houston TX
- Cold Spring Harbor Single Cell Analysis Course
- Seminar, Molecular and Cellular Biology Department, University of California Davis
- 3D Imaging in the Life and Physical Sciences, Microscience Microscopy Congress Manchester, England
- Annual Meeting of the Microscopy Society of America, Hartford CT
- 58th Annual Meeting of the Biophysical Society, San Francisco CA
- Keystone Symposium, 'Frontiers of Structural Biology' Snowbird UT

2013

- Seminar, Molecular Biophysics Group, UT Southwestern Medical Center, Dallas TX
- Wellcome Trust Meeting, 'Epigenomics of Common Diseases', Cambridge UK
- Lawrence Berkeley National Laboratory Integrated Bioimaging Initiative
- University of California San Francisco and Lawrence Berkeley National Laboratory Imaging Workshop, University of California San Francisco
- Cold Spring Harbor Single Cell Analysis Course, NY
- RACIRI Summer School, St. Petersburg Russia
- Annual AVS International Symposium and Exhibition, San Jose CA
- EMBO-EMBL 'Seeing is Believing: Imaging the Processes of Life', Heidelberg Germany
- 9th Kavli Futures Symposium: The intersection of nano science and neuroscience at University of California Berkeley
- Seminar, Sanford-Burnham Medical Research Institute, San Diego CA
- 11th International Conference on Biology and Synchrotron Radiation, Hamburg Germany
- Seminar, School of Life Sciences, Arizona State University, Tempe AZ
- 39th Lorne Conference on Protein Structure and Function, Lorne Australia
- Lorne Infection and Immunity Conference, Lorne Australia

- Keystone Meeting, Structural Analysis of Supramolecular Assemblies by Hybrid Methods, Lake Tahoe CA

2012

- Keystone Meeting, 'Structural Biology of Cellular Processes', Keystone CO
- AAAS Annual Meeting, Vancouver Canada
- 6th International Conference on Structural Analysis of Supramolecular Assemblies by Hybrid Methods, Lake Tahoe CA
- XI Research Course on X-ray Science 2012, Hamburg Germany
- Correlative Microscopy Webinar sponsored by Biophysical Society
- National Science Foundation 'Taking the World by STORM: Advances in Imaging for Materials and Biology', Amherst MA
- NIH Roadmap Epigenomics Program Investigators' Meeting, NIDA-NIH, Bethesda MD
- Cold Spring Harbor 'Single Cell Analysis' Course, NY
- Structural Biology Related to HIV-AIDS - 2012, NIGMS-NIH, Bethesda MD
- Microscopy Society of America, Phoenix, AZ
- X-ray Bioimaging, Hsinchu Taiwan
- Biophysics Society Meeting on Weak Protein-Ligand Interactions, Beijing China
- 'Dynamic Organization of Nuclear Function', Cold Spring Harbor Laboratories, NY
- Stanford Synchrotron Light Source Workshop, Palo Alto CA
- Seminar, Department of Pharmaceutical Sciences, University of Nebraska School of Medicine, Omaha NE
- A 3D Cellular Context for the Macromolecular World, Cambridge UK

2011

- Advanced Imaging Methods Workshop, University of California Berkeley
- Seminar, Department of Physical Chemistry, University of Wisconsin, Madison WI
- EMBO EMBL Symposium, 'Seeing is Believing - Imaging the Processes of Life, Heidelberg Germany
- Seminar, Department of Bioengineering, University of California Santa Cruz
- Microscopy Society of America, Nashville, TN
- Frontiers in Bioimaging, Manchester England
- 'Physicists and Biologists Working Together: Facilitating X-ray Biophotonics', Melbourne Australia
- 8th Annual Advanced Imaging Visualizations in Biology, San Jose CA
- Three-Dimensional Tomography of Materials, Boston, MA
- Seminar, Department of Physics, University of Melbourne, Melbourne Australia

2010

- Structural Analysis of Supramolecular Assemblies by Hybrid Methods, Lake Tahoe CA
- Joint Meeting of Biology and Synchrotron Radiation (BSR) and Medical Applications of Synchrotron Radiation (MASR), Melbourne Australia
- Center for X-ray Science Workshop, Melbourne Australia
- Novel Approaches to Bioimaging II, Conference organized by Howard Hughes Medical Institute Janelia Farm Research Campus, MD
- International Meeting on the Physics of Single Molecule Processes and Molecular Recognition in Organic Systems, Bielefeld Germany

- Synchrotron Radiation for Bio-Imaging at there German Synchrotron, PETRA III, Hamburg Germany
- Seminar, Pacific Northwest National Laboratory Frontiers in Biological Sciences Seminar Series. Richland WA
- Seminar, University of California at Davis Teller Series in Interdisciplinary Science Seminar series, Davis CA
- International Symposium on Diffraction in Structural Biology, Paris France
- Developments in 3D Imaging for Biology Symposium at Microscience 2010, London England
- International Protein Society Meeting
- International Microscopy Congress, Rio de Janeiro Brazil
- Seminar, ETH Zurich Department of Physics, Zurich
- NIH-NIAID Meeting on Visualizing Macromolecular Complexes and Cellular Structures, Bethesda MD

2009

- 'The Future of Microscopy: Breaking the Barriers;' Wellcome Trust, Cambridge England
- Bioengineering Department, University of California Davis
- Seminar, Laboratory of Molecular Biology, The Medical Research Council, Cambridge UK
- Single Cell Techniques Workshop, Cold Spring Harbor Laboratories NY
- International Congress on X-ray Optics and Microanalysis, Karlsruhe Germany
- 'Fluorescence Microscopy Beyond the Diffraction Limit', American Chemical Society Meeting, Wash DC
- 'Towards the Virtual Cell,' European Neuroscience Institute Goettingen, Germany

2008

- Keystone Symposium: Frontiers of Structural Biology, Steamboat Springs CO
- 5th Annual Advanced Imaging Visualizations in Biology, University of California Berkeley, Berkeley CA
- Gordon Conference - Three Dimensional Electron Microscopy
- Gordon Conference - Methods in Structural Biology
- 9th International Conference on X-ray Microscopy, Zurich Switzerland
- Microscopy and Microanalysis 2008, Albuquerque New Mexico
- 14th European Microscopy Conference, Aachen Germany
- 'X-ray and Electron Imaging' a Symposium on Visualizing Chemistry: Advances in Chemical Imaging, sponsored by the National Academy of Sciences
- Seminar, Drug Discovery Group at EMD-Serono, Boston MA
- 9th Asia-Pacific Microscopy Conference, Jeju Island, Korea
- Workshop on X-ray Microscopy, New Developments at Diamond, Oxford England
- Correlative Microscopy, Karolinska Institute, Stockholm Sweden
- Seminar, Department of Physics, Royal Institute of Technology, Stockholm Sweden
- Seminar, Biochemistry Department, La Trobe University, Melbourne Australia
- Seminar, Physics Department, Monash University, Melbourne Australia

2007

- Seminar, Department of Physics, University of California Los Angeles
- Colloquium, Department of Physics, University of Wisconsin Madison, Madison WI

- Arizona Imaging and Microanalysis Society
- Seeing is Believing: The Future of Molecular and Biomolecular Imaging Workshop, Duke University
- Seminar, National Center for Biotechnology, Campus Universidad Autonoma, Madrid Spain
- Facilitating X-ray Biophotonics Workshop, ARC Centre of Excellence for Coherent X-ray Science, Melbourne Australia
- Gulliver Multiscale Bioimaging Workshop, Lawrence Berkeley National Laboratory, Berkeley CA
- X-ray Microscopy School, Erice Italy
- X-ray Microscopy Workshop, Erice Italy
- Workshop on Scanning Transmission X-ray Microscopy and X-ray Nanoprobe Capabilities and Needs for Geo-, Environmental, and Biological Sciences, Stanford University
- NSLS-II User Workshop, Brookhaven National Laboratory, NY
- Microscopy and Microanalysis 2007, Miami FL
- Biology and Synchrotron Radiation, Manchester England
- Workshop on Correlative Microscopy for 3-D Cell Imaging, Berlin Germany
- Seminar, Department of Biochemistry, Rice University, Houston TX
- Lecture, HERCULES course on Advances and New Applications of Synchrotron Radiation for Structural Biology, European Synchrotron Research Facility, Grenoble France
- MIT Workshop: Frontiers in Modern Microscopy, Boston MA

2006

- Synchrotron Radiation International, Daegu S. Korea
- Focus on Microscopy 2006, Perth Australia
- Biology and Medicine with Low Energy Synchrotron Radiation, Aarhus Denmark
- The Jackson Laboratory Course: Frontiers in Microscopy
- NIGMS-NIH Imaging Workshop, Bethesda MD
- Lehigh University Biological Imaging and Engineered Biosystems Workshop, Bethlehem PA
- Seminar, School of Chemistry and Biochemistry, Georgia Institute of Technology, Atlanta GA

2005

- Seminar, Max Planck Institute, Stuttgart Germany
- Spain Synchrotron Users Association Meeting, Madrid Spain
- 8th International Conference on X-ray Microscopy, Himeji Japan
- Synchrotron Soleil, Paris France
- American Chemical Society Meeting, Boston MA
- Spanish Synchrotron Users Meeting, Barcelona Spain
- American Physical Society Meeting
- National Nanotechnology Initiative Workshop, DOE, Washington DC
- Structural Analysis of Large Macromolecular Assemblies: Sizing up the Challenges, National Institutes of Health Workshop, Bethesda MD
- NIBIB/NIH Grantee Meeting, Washington DC
- University of Texas School of Medicine, Houston

2004

- XIV International Conference on VUV Radiation in Physics, Cairns, Australia
- Third International Electron Tomography Meeting, Troy NY

- Synchrotron Radiation Center Users Meeting, Madison WI
- X-ray Microscopy Workshop, ALBA Synchrotron, Barcelona Spain
- National Synchrotron Radiation Laboratory (NSRL) Users Meeting, Taiwan
- Biophysical Society Meeting, Baltimore MD
- DOE Genomes to Life Workshop, Washington DC
- Keystone Conference
- Gordon Conference, Mechanisms of Toxicity
- Microscopy and Microanalysis 2004, Savannah GA
- NIH-DOE Imaging Workshop, Bethesda MD
- Seminar, Physical Biosciences Division Seminar Series, Lawrence Berkeley National Laboratory
- Annual NIH-NCRR Principal Investigators Meeting, Bethesda MD
- Summer Lecture Series, Lawrence Berkeley National Laboratory
- Bio-X Seminar Series, Stanford University

2003

- Advanced Light Source Annual Users Meeting, Berkeley California
- Diamond Light Source Workshop on Soft X-ray Microscopy and Imaging, Oxford England
- X-ray Microscopy Workshop at Synchrotron Soleil, France
- Quantum Dots in Biology, SPIE, San Jose CA,
- Canadian Society for Chemistry, Ottawa Canada
- Experimental Systems and Scientific Support Group Meeting, Advanced Light Source, Lawrence Berkeley National Laboratory
- Molecular Foundry Workshop, Lawrence Berkeley National Laboratory
- Seminar, University of Texas Austin, Austin TX
- University of California QB3 Imaging Symposium, Berkeley CA
- Seminar, National Synchrotron Light Source, Brookhaven National Laboratory, NY
- Lawrence Berkeley National Laboratory Life Sciences Division Retreat

2002

- VII International Conference on X-ray Microscopy, Grenoble France
- Microscopy and Microanalysis 2002, Quebec Canada
- International Society of Differentiation, Lyon France
- Canadian Light Source Annual Users Meeting, Saskatchewan Canada
- Stanford Synchrotron Radiation Laboratory Annual Users Meeting, Palo Alto
- Gordon Conference, Lasers in Medicine and Biology
- Department of Energy Imaging Workshop, Washington DC
- Mini-symposium, American Society for Cell Biology
- Coherent and Zeiss, Workshop on Imaging Techniques, San Jose CA
- Seminar, M.D. Anderson Cancer Center, Houston TX

2001

- Symposium on 'Tracking Proteins,' Osnabruck Germany
- XIII International Conference on Vacuum Ultraviolet Radiation in Physics, Trieste Italy
- Bay Area Science Infrastructure Consortium – Focus on Bioscience
- University of Colorado Health Sciences Center, Denver CO

- Department of Energy Scientific Lecture Series, Germantown MD
- Seminar, Department of Biology, Purdue University

2000

- Seminar, Physics Institute, University of Göttingen, Göttingen Germany
- Gordon Conference, Developmental Physiology, New Hampshire
- Microscopy Society of America
- American Society for Cell Biology
- West Coast Developmental Biology Meeting
- Seminar, Center for Environmental Biology, Lawrence Berkeley National Laboratory
- JASON Summer Study on Biofuture, San Diego CA

University and UC System-wide Service

2014-now	Executive Committee, Anatomy Dept.
2010-2013	Pharmacy School Curriculum Committee
2000-now	Presentations to dignitaries visiting the Advanced Light Source, LBNL; although too numerous to list they include Secretaries of Energy (W. Richardson, S. Abraham, S. Bodman); U.S. Senators, Congressmen and Congressional Aides; Visiting national and international dignitaries and scientists; members of the UC Board of Regents; UC President J. Napolitano; and numerous others. (Multiple presentations per year)
2012	Faculty Search Committee, Anatomy Dept.
2009	Director of Physical Biosciences Division Search Committee, Lawrence Berkeley National Laboratory
2006	Anatomy Department 'Renaming' Committee
2005	Congressional Briefing, presentation to Northern California Senators, Representatives and staff members focused on scientific interactions between UCSF and LBNL scientists
2001	Director of Life Sciences Division Search Committee, Lawrence Berkeley National Laboratory

Teaching

2009-now	Course Director, Anatomy 115 - Histology and Physiology, Winter Quarter
2005-now	Anatomy 115 - Histology and Physiology, Winter Quarter

Special Lectures

2012-now	Cold Spring Harbor Single Cell Analysis Summer Course
2012-now	UC Berkeley Imaging Course
2009-now	Guest Lecturer, University of California, Berkeley Graduate Course in Physical Biophysics, Spring Semester

2015	Asia-Pacific Hercules (Hercules-France, School of Neutrons & Synchrotron Radiation for Science)
2013	RACIRI Summer School, St. Petersburg Russia
2012	XI Research Course on X-ray Science, Hamburg Germany
2007	HERCULES course on Advances and New Applications of Synchrotron Radiation for Structural Biology, ESRF, Grenoble France
2007	International X-ray Microscopy School, Erice Italy

Informal Teaching - Research Projects

2006-now	Lawrence Berkeley National Laboratory Summer Students
2000-now	44 predoctoral students
2000-now	30 postdoctoral students

Public Service

2013	Public Lecture, Science at the Theater, 'New Biology, New World', Berkeley
2010	Public Lecture, Swissnex San Francisco, an initiative of Switzerland's State Secretariat for Education and Research, managed in cooperation with the Dept. of Foreign Affairs to promote the exchange of knowledge and ideas
2008	Public Science Lecture, Berkeley
2006	Public Science Lecture, Berkeley

Research Awards - Active

NIH-NIGMS P41 GM103445 (Larabell PI)
'Resource for X-ray Tomography of Whole Cells'

DOE-BER (Larabell PI)
'Biological Microscopy at the ALS'

Gordon and Betty Moore Foundation (Larabell PI)
'Cryogenic Super-resolution Fluorescence Microscopy'

NIH-NIDA U01 DA040582 (Lomvardas PI, Larabell & Brown Co-Is)
'Deciphering nuclear bodies and compartments that govern singular olfactory receptor expression'

NIH-NIDA R01 DA036985 (Lomvardas PI, Basbaum & Larabell Co-Is)
'Influence of drug abuse on neuronal nuclear and chromatin architecture'

NIH-NIDA R01 DA030320 (Lomvardas and Larabell Co-PIs)
'New Technologies for Live Imaging of Epigenetic Processes'

Patents

- U.S. Patent #7822174, Cryotomography X-ray Microscopy Stage
- U.S. Patent #7852554, Cryogenic Immersion Microscope
- U.S. Patent #8039438, Synthetic Peptides that Cause F-actin Bundling and Block Actin Depolymerization
- Application #20030113709, Semiconductor Nanocrystal-Based Cellular Imaging

Publications (Peer reviewed)

- Ugarte F, Sousae R, Cinquin B, Sanchez G, Inman M, Tsang H, Warr M, Passegue E, Larabell CA, Forsberg EC. Progressive chromatin condensation and H3K9 methylation regulate the differentiation of embryonic and hematopoietic stem cells. *Stem Cell Reports*. 2015. In press.
- Elgass KD, Smith EA, LeGros MA, Larabell CA, Ryan MT. Analysis of ER-mitochondria contacts using correlative fluorescence microscopy and soft X-ray tomography of mammalian cells. *J Cell Sci*. 2015 Aug 1; 128(15):2795-804. PMID: 26101352
- Do M, Isaacson SA, McDermott G, Le Gros MA, Larabell CA. Imaging and characterizing cells using tomography. *Arch. Biochem. Biophys*. 2015 Aug; 581:111-121.
- Smith EA, Cinquin BP, Do M, McDermott G, Le Gros MA, Larabell CA. Correlative cryogenic tomography of cells using light and soft x-rays. *Ultramicroscopy*. 2014 Aug; 143:33-40. PMID: 24355261. PMCID: PMC4013260
- Cinquin BP, Do M, McDermott G, Walters AD, Myllys M, Smith EA, Cohen-Fix O, Le Gros MA, Larabell CA. Putting molecules in their place. *J Cell Biochem*. 2014 Feb; 115(2):209-16. PMID: 23966233. PMCID: PMC3865101
- Le Gros MA, McDermott G, Cinquin BP, Smith EA, Do M, Chao WL, Naulleau PP, Larabell CA. Biological soft X-ray tomography on beamline 2.1 at the Advanced Light Source. *J Synchrotron Radiat*. 2014 Nov; 21(Pt 6):1370-7. PMID: 25343808. PMCID: PMC4211134
- Patwardhan A, Ashton A, Brandt R, Butcher S, Carzaniga R, Chiu W, Collinson L, Doux P, Duke E, Ellisman MH, Franken E, Grünewald K, Heriche JK, Koster A, Kühlbrandt W, Lagerstedt I, Larabell C, Lawson CL, Saibil HR, Sanz-García E, Subramaniam S, Verkade P, Swedlow JR, Kleywegt GJ. A 3D cellular context for the macromolecular world. *Nat Struct Mol Biol*. 2014 Oct; 21(10):841-5. PMID: 25289590. PMCID: PMC4346196
- Smith EA, McDermott G, Do M, Leung K, Panning B, Le Gros MA, Larabell CA. Quantitatively imaging chromosomes by correlated cryo-fluorescence and soft x-ray tomographies. *Biophys J*. 2014 Oct 21; 107(8):1988-96. PMID: 25418180. PMCID: PMC4213715
- Walters AD, May CK, Dauster ES, Cinquin BP, Smith EA, Robellet X, D'Amours D, Larabell CA, Cohen-Fix O. The yeast polo kinase cdc5 regulates the shape of the mitotic nucleus. *Curr Biol*. 2014 Dec 1; 24(23):2861-7. PMID: 25454593. PMCID: PMC4255140
- Parkinson DY, Epperly LR, McDermott G, Le Gros MA, Boudreau RM, Larabell CA. Nanoimaging cells using soft X-ray tomography. *Methods Mol Biol*. 2013; 950:457-81. PMID: 23086890

- Smith EA, Cinquin BP, McDermott G, Le Gros MA, Parkinson DY, Kim HT, Larabell CA. Correlative microscopy methods that maximize specimen fidelity and data completeness, and improve molecular localization capabilities. *J Struct Biol.* 2013 Oct; 184(1):12-20. PMID: 23531637. PMCID: PMC3758393
- Isaacson SA, Larabell CA, Le Gros MA, McQueen DM, Peskin CS. The influence of spatial variation in chromatin density determined by X-ray tomograms on the time to find DNA binding sites. *Bull Math Biol.* 2013 Nov; 75(11):2093-117. PMID: 23955281. PMCID: PMC3934756
- Clowney EJ, Legros MA, Mosley CP, Clowney FG, Markenskoff-Papadimitriou EC, Myllys M, Barnea G, Larabell CA, Lomvardas S. Nuclear aggregation of olfactory receptor genes governs their monogenic expression. *Cell.* 2012 Nov 9; 151(4):724-37.
- Hanssen E, Knoechel C, Dearnley M, Dixon MW, Le Gros M, Larabell C, Tilley L. Soft X-ray microscopy analysis of cell volume and hemoglobin content in erythrocytes infected with asexual and sexual stages of *Plasmodium falciparum*. *J Struct Biol.* 2012 Feb; 177(2):224-32.
- Parkinson DY, Knoechel C, Yang C, Larabell CA, Le Gros MA. Automatic alignment and reconstruction of images for soft X-ray tomography. *J Struct Biol.* 2012 Feb; 177(2):259-66.
- McDermott G, Le Gros MA, Larabell CA. Visualizing cell architecture and molecular location using soft x-ray tomography and correlated cryo-light microscopy. *Annu Rev Phys Chem.* 2012 May 5; 63:225-39.
- McDermott G, Fox DM, Epperly L, Wetzler M, Barron AE, Le Gros MA, Larabell CA. Visualizing and quantifying cell phenotype using soft X-ray tomography. *Bioessays.* 2012 Apr; 34(4):320-7.
- Hanssen E, Knoechel C, Klonis N, Abu-Bakar N, Deed S, LeGros M, Larabell C, Tilley L. Cryo transmission X-ray imaging of the malaria parasite, *P. falciparum*. *J Struct Biol.* 2011 Jan; 173(1):161-8. PMID: 20826218. PMCID: PMC3005799
- Uchida M, Sun Y, McDermott G, Knoechel C, Le Gros MA, Parkinson D, Drubin DG, Larabell CA. Quantitative analysis of yeast internal architecture using soft X-ray tomography. *Yeast.* 2011 Mar; 28(3):227-36. PMID: 21360734. PMCID: PMC3404734
- Larabell CA, Nugent KA. Imaging cellular architecture with X-rays. *Curr Opin Struct Biol.* 2010 Oct; 20(5):623-31. PMID: 20869868. PMCID: PMC3268817
- Le Gros MA, McDermott G, Uchida M, Knoechel CG, Larabell CA. High-aperture cryogenic light microscopy. *J Microsc.* 2009 Jul; 235(1):1-8. PMID: 19566622. PMCID: PMC3350647
- McDermott G, Le Gros MA, Knoechel CG, Uchida M, Larabell CA. Soft X-ray tomography and cryogenic light microscopy: the cool combination in cellular imaging. *Trends Cell Biol.* 2009 Nov; 19(11):587-95. PMID: 19818625. PMCID: PMC3276488
- Parkinson DY, McDermott G, Etkin LD, Le Gros MA, Larabell CA. Quantitative 3-D imaging of eukaryotic cells using soft X-ray tomography. *J Struct Biol.* 2008 Jun; 162(3):380-6. PMID: 18387313. PMCID: PMC2505111
- Ashcroft JM, Gu W, Zhang T, Hughes SM, Hartman KB, Hofmann C, Kanaras AG, Kilcoyne DA, Le Gros M, Yin Y, Alivisatos AP, Larabell CA. TiO₂ nanoparticles as a soft X-ray molecular probe. *Chem Commun (Camb).* 2008 Jun 7; (21):2471-3. PMID: 18491018. PMCID: PMC3355471
- Chan AP, Kloc M, Larabell CA, Le Gros M, Etkin LD. The maternally localized RNA *FatVg* is required for cortical rotation and germ cell formation. *Mech. Dev.* 2007; 124(5):350-363.

- Fu A, Gu W, Boussert B, Koski K, Gerion D, Manna L, Le Gros M, Larabell CA, Alivisatos AP. Semiconductor quantum rods as single molecule fluorescent biological labels. *Nano Lett.* 2007 Jan; 7(1):179-82. PMID: 17212460. PMCID: PMC3984543
- Gu, W. W., Etkin, L. D., Le Gros, M. A. & Larabell, C. A. (2007) X-ray tomography of *Schizosaccharomyces pombe*. *Differentiation*, 75(6), 529-535.
- Tang YJ, Ashcroft JM, Chen D, Min G, Kim CH, Murkhejee B, Larabell C, Keasling JD, Chen FF. Charge-associated effects of fullerene derivatives on microbial structural integrity and central metabolism. *Nano Lett.* 2007 Mar; 7(3):754-60. PMID: 17288489
- Chan AP, Kloc M, Larabell CA, LeGros M, Etkin LD. The maternally localized RNA *fatvg* is required for cortical rotation and germ cell formation. *Mech Dev.* 2007 May; 124(5):350-63. PMID: 17376659. PMCID: PMC2435194
- Gu W, Etkin LD, Le Gros MA, Larabell CA. X-ray tomography of *Schizosaccharomyces pombe*. *Differentiation*. 2007 Jul; 75(6):529-35. PMID: 17459084
- Traverso EE, Cho MS, Wu CF, Sater AK, Larabell CA, Kloc M, Etkin LD. Disruption of the dynamic sub-cellular localization of the *Xenopus* tumorhead protein causes embryonic lethality at the early gastrula transition. *Differentiation*. 2007 Dec; 75(10):947-56. PMID: 17459085
- Attwood D, Chao W, Anderson E, Liddle JA, Harteneck B, Fischer P, Schneider G, Le Gros M, Larabell C. Imaging at high spatial resolution: Soft x-ray microscopy to 15 nm. *Journal of Biomedical Nanotechnology* 2006; 2(2):75-78
- Alivisatos AP, Gu W, Larabell C. Quantum dots as cellular probes. *Annu Rev Biomed Eng.* 2005; 7:55-76. PMID: 16004566
- Gu W, Pellegrino T, Parak WJ, Boudreau R, Le Gros MA, Gerion D, Alivisatos AP, Larabell CA. Quantum-dot-based cell motility assay. *Sci STKE.* 2005 Jun 28; 2005(290):pl5. PMID: 15985641
- Le Gros MA, McDermott G, Larabell CA. X-ray tomography of whole cells. *Curr Opin Struct Biol.* 2005 Oct; 15(5):593-600. PMID: 16153818
- Fu A, Gu W, Larabell C, Alivisatos AP. Semiconductor nanocrystals for biological imaging. *Curr Opin Neurobiol.* 2005 Oct; 15(5):568-75. PMID: 16150591
- Larabell CA, Le Gros MA. X-ray tomography generates 3-D reconstructions of the yeast, *saccharomyces cerevisiae*, at 60-nm resolution. *Mol Biol Cell.* 2004 Mar; 15(3):957-62. PMID: 14699066. PMCID: PMC363052
- Larabell CA, Rowning BA, Moon RT. A PKC wave follows the calcium wave after activation of *Xenopus* eggs. *Differentiation*. 2004 Feb; 72(1):41-7. PMID: 15008825
- Miao J, Hodgson KO, Ishikawa T, Larabell CA, LeGros MA, Nishino Y. Imaging whole *Escherichia coli* bacteria by using single-particle x-ray diffraction. *Proc Natl Acad Sci U S A.* 2003 Jan 7; 100(1):110-2. PMID: 12518059. PMCID: PMC140897
- Parak WJ, Gerion D, Pellegrino T, Zanchet D, Micheel C, Williams SC, Boudreau R, Le Gros MA, Larabell CA, Alivisatos AP. Biological applications of colloidal nanocrystals. *Nanotechnology* 2003; 14:R1-R13
- Johnson N, Krebs M, Boudreau R, Giorgi G, LeGros M, Larabell C. Actin-filled nuclear invaginations indicate degree of cell de-differentiation. *Differentiation*. 2003 Sep; 71(7):414-24. PMID: 12969334

- Weaver C, Farr GH, Pan W, Rowning BA, Wang J, Mao J, Wu D, Li L, Larabell CA, Kimelman D. GBP binds kinesin light chain and translocates during cortical rotation in *Xenopus* eggs. *Development*. 2003 Nov; 130(22):5425-36. PMID: 14507779
- Larabell CA, Etkin LD. Special issue on imaging. *Differentiation* 2003; 71:517.
- Pellegrino T, Parak WJ, Boudreau R, Le Gros MA, Gerion D, Alivisatos AP, Larabell CA. Quantum dot-based cell motility assay. *Differentiation*. 2003 Dec; 71(9-10):542-8. PMID: 14686951
- Parak WJ, Boudreau R, Le Gros MA, Gerion D, Zanchet D, Micheel CM, Williams SC, Alivisatos AP, Larabell CA. Cell motility and metastatic potential studies based on Quantum Dot imaging of phagokinetic tracks. *Advanced Materials*. 2002; 14:882-885.
- Schneider G, Anderson E, Vogt S, Knochel C, Weiss D, Le Gros M, Larabell C. Computed tomography of cryogenic cells. *Surface Review and Letters*. 2002; 9:177-183.
- Parak WJ, Gerion D, Pellegrino T, Zanchet D, Micheel CM, Williams SC, Boudreau R, Le Gros MA, Larabell CA, Alivisatos AP. Biological applications of colloidal nanocrystals. *J. Nanosci. & Nanotech.* 2002; 14:882-885.
- Meyer-Ilse W, Hamamoto D, Nair A, Lelièvre SA, Denbeaux G, Johnson L, Pearson AL, Yager D, Legros MA, Larabell CA. High resolution protein localization using soft X-ray microscopy. *J Microsc.* 2001 Mar; 201(Pt 3):395-403. PMID: 11240856
- Ziegelbauer J, Shan B, Yager D, Larabell C, Hoffmann B, Tjian R. Transcription factor MIZ-1 is regulated via microtubule association. *Mol Cell*. 2001 Aug; 8(2):339-49. PMID: 11545736
- Denbeaux G, Anderson E, Chao W, Eimuller T, Johnson L, Kohler M, Larabell C, Legros M, Fischer P, Pearson A, Schultz G, Yager D, Attwood D. Soft X-ray microscopy to 25 nm with applications to biology and magnetic materials. *Nuclear Instruments & Methods in Physics Res.* 2001; 467:841-44.
- Kozek WJ, Nair A, Denbeaux G, Brown J, Larabell C, Meyer-Ilse W. Application of soft X-ray and other microscopy techniques to elucidate the structure of *Trichinella spiralis* newborn larva. 2000; *Acta Parasitologica*. 45:157.
- Larabell CA. Confocal microscopy of live *Xenopus* oocytes, eggs, and embryos. *Methods Mol Biol*. 2000; 135:175-82. PMID: 10791314
- Taunton J, Rowning BA, Coughlin ML, Wu M, Moon RT, Mitchison TJ, Larabell CA. Actin-dependent propulsion of endosomes and lysosomes by recruitment of N-WASP. *J Cell Biol*. 2000 Feb 7; 148(3):519-30. PMID: 10662777. PMCID: PMC2174808
- Nakamura H, Wu C, Kuang J, Larabell C, Etkin LD. XCS-1, a maternally expressed gene product involved in regulating mitosis in *Xenopus*. *J Cell Sci*. 2000 Jul; 113 (Pt 13):2497-505. PMID: 10852828
- Miller JR, Rowning BA, Larabell CA, Yang-Snyder JA, Bates RL, Moon RT. Establishment of the dorsal-ventral axis in *Xenopus* embryos coincides with the dorsal enrichment of dishevelled that is dependent on cortical rotation. *J Cell Biol*. 1999 Jul 26; 146(2):427-37. PMID: 10427095. PMCID: PMC2156185
- Kloc M, Larabell C, Chan AP, Etkin LD. Contribution of METRO pathway localized molecules to the organization of the germ cell lineage. *Mech Dev*. 1998 Jul; 75(1-2):81-93. PMID: 9739112
- Wang F, Weaver VM, Petersen OW, Larabell CA, Dedhar S, Briand P, Lupu R, Bissell MJ. Reciprocal interactions between beta1-integrin and epidermal growth factor receptor in three-dimensional

basement membrane breast cultures: a different perspective in epithelial biology. *Proc Natl Acad Sci U S A*. 1998 Dec 8; 95(25):14821-6. PMID: 9843973. PMCID: PMC24533

- Lelièvre SA, Weaver VM, Nickerson JA, Larabell CA, Bhaumik A, Petersen OW, Bissell MJ. Tissue phenotype depends on reciprocal interactions between the extracellular matrix and the structural organization of the nucleus. *Proc Natl Acad Sci U S A*. 1998 Dec 8; 95(25):14711-6. PMID: 9843954. PMCID: PMC24514
- Rowning BA, Wells J, Wu M, Gerhart JC, Moon RT, Larabell CA. Microtubule-mediated transport of organelles and localization of beta-catenin to the future dorsal side of *Xenopus* eggs. *Proc Natl Acad Sci U S A*. 1997 Feb 18; 94(4):1224-9. PMID: 9037034. PMCID: PMC19772
- Larabell CA, Torres M, Rowning BA, Yost C, Miller JR, Wu M, Kimelman D, Moon RT. Establishment of the dorso-ventral axis in *Xenopus* embryos is presaged by early asymmetries in beta-catenin that are modulated by the Wnt signaling pathway. *J Cell Biol*. 1997 Mar 10; 136(5):1123-36. PMID: 9060476. PMCID: PMC2132470
- Weaver VM, Petersen OW, Wang F, Larabell CA, Briand P, Damsky C, Bissell MJ. Reversion of the malignant phenotype of human breast cells in three-dimensional culture and in vivo by integrin blocking antibodies. *J Cell Biol*. 1997 Apr 7; 137(1):231-45. PMID: 9105051. PMCID: PMC2139858
- Krauss SW, Larabell CA, Lockett S, Gascard P, Penman S, Mohandas N, Chasis JA. Structural protein 4.1 in the nucleus of human cells: dynamic rearrangements during cell division. *J Cell Biol*. 1997 Apr 21; 137(2):275-89. PMID: 9128242. PMCID: PMC2139783
- Larabell CA, Rowning BA, Wells J, Wu M, Gerhart JC. Confocal microscopy analysis of living *Xenopus* eggs and the mechanism of cortical rotation. *Development*. 1996 Apr; 122(4):1281-9. PMID: 8620855
- Kloc M, Larabell C, Etkin LD. Elaboration of the messenger transport organizer pathway for localization of RNA to the vegetal cortex of *Xenopus* oocytes. *Dev Biol*. 1996 Nov 25; 180(1): 119-30. PMID: 8948579
- Larabell CA. Cortical cytoskeleton of the *Xenopus* oocyte, egg, and early embryo. *Curr Top Dev Biol*. 1995; 31:433-53. PMID: 8746672
- Gallicano GI, Larabell CA, McGaughey RW, Capco DG. Novel cytoskeletal elements in mammalian eggs are composed of a unique arrangement of intermediate filaments. *Mech Dev*. 1994 Mar; 45(3):211-26. PMID: 8011554
- Capco DG, Gallicano GI, McGaughey RW, Downing KH, Larabell CA. Cytoskeletal sheets of mammalian eggs and embryos: a lattice-like network of intermediate filaments. *Cell Motil Cytoskeleton*. 1993; 24(2):85-99. PMID: 8440027
- Larabell CA. A new technique for isolation and visualization of the *Xenopus* egg cortex reveals a complex cytoskeleton. *J Struct Biol*. 1993 Mar-Apr; 110(2):154-9. PMID: 8338718
- Bonnell BS, Larabell C, Chandler DE. The sea urchin egg jelly coat is a three-dimensional fibrous network as seen by intermediate voltage electron microscopy and deep etching analysis. *Mol Reprod Dev*. 1993 Jun; 35(2):181-8. PMID: 8318223
- Larabell CA, Fukuyama K, Epstein WL. Desmosome differentiation during epidermal cornification: new observations obtained from intermediate voltage electron microscopy. *J Invest Dermatol*. 1993 Jul; 101(1):103-4. PMID: 8331292

- Larabell C, Nuccitelli R. Inositol lipid hydrolysis contributes to the Ca²⁺ wave in the activating egg of *Xenopus laevis*. *Dev Biol*. 1992 Oct; 153(2):347-55. PMID: 1327924
- Lindsay LL, Larabell CA, Hedrick JL. Localization of a chymotrypsin-like protease to the perivitelline space of *Xenopus laevis* eggs. *Dev Biol*. 1992 Dec; 154(2):433-6. PMID: 1426648
- Dersch MA, Bement WM, Larabell CA, Mecca MD, Capco DG. Cortical membrane-trafficking during the meiotic resumption of *Xenopus laevis* oocytes. *Cell Tissue Res*. 1991 Feb; 263(2):375-83. PMID: 2007258
- Larabell C, Chandler DE. Fertilization-induced changes in the vitelline envelope of echinoderm and amphibian eggs: self-assembly of an extracellular matrix. *J Electron Microscop Tech*. 1991 Mar; 17(3): 294-318. PMID: 2045963
- Smith NR, Benson S, Larabell CA. An in-vitro extracellular matrix model system to visualize whole cells with intermediate voltage electron microscopy (IVEM). *J Electron Microscop Tech*. 1991 Nov; 19(3):380-1. PMID: 1795190
- Larabell CA, Chandler DE. Stepwise transformation of the vitelline envelope of *Xenopus* eggs at activation: a quick-freeze, deep-etch analysis. *Dev Biol*. 1990 Jun; 139(2):263-8. PMID: 2338169
- Larabell CA, Chandler DE. The coelomic envelope of *Xenopus laevis* eggs: a quick-freeze, deep-etch analysis. *Dev Biol*. 1989 Jan; 131(1):126-35. PMID: 2909400
- Racowsky C, Baldwin KV, Larabell CA, DeMarais AA, Kazilek CJ. Down-regulation of membrana granulosa cell gap junctions is correlated with irreversible commitment to resume meiosis in golden Syrian hamster oocytes. *Eur J Cell Biol*. 1989 Aug; 49(2):244-51. PMID: 2776774
- Larabell CA, Chandler DE. Quick-freeze, deep-etch, rotary-shadow views of the extracellular matrix and cortical cytoskeleton of *Xenopus laevis* eggs. *J Electron Microscop Tech*. 1989 Nov; 13(3):228-43. PMID: 2585120
- Larabell CA, Chandler DE. Freeze-fracture analysis of structural reorganization during meiotic maturation in oocytes of *Xenopus laevis*. *Cell Tissue Res*. 1988 Jan; 251(1):129-36. PMID: 3342433
- Larabell CA, Chandler DE. The extracellular matrix of *Xenopus laevis* eggs: a quick-freeze, deep-etch analysis of its modification at fertilization. *J Cell Biol*. 1988 Aug; 107(2):731-41. PMID: 3417770. PMCID: PMC2115231
- Larabell CA, Chandler DE. In vitro formation of the "S" layer, a unique component of the fertilization envelope in *Xenopus laevis* eggs. *Dev. Biol*. 1988; 130, 356-364. PMID: 3181634

Book Chapters

- Le Gros MA, Chen JH, Do M, McDermott G, and Larabell CA. "Putting molecules in the picture: Using correlated light microscopy and soft x-ray tomography to study cells," In: Synchrotron Light Sources and Free-Electron Lasers, J Hastings and JR Schneider eds., Springer International Publishing Switzerland. 2015; in press.
- Smith EA, Cinquin BP, McDermott G, Le Gros MA, and Larabell CA. "Correlated soft x-ray tomography and cryo-light microscopy," In: Imaging Life: Biological Systems from Atoms to Tissues. GC Howard, WE Brown and M Auer eds., Oxford University Press USA. 2014; pp 209-227.

- Parkinson DY, Epperly LR, McDermott G, Le Gros MA, Boudreau RM, and Larabell CA. "Nanoimaging cells using soft X-ray tomography," In: Nanoimaging, A Sousa and MJ Kruhlak eds., Methods in Molecular Biology Vol 950. 2013; pp. 457-81.
- Le Gros MA, Knoechel CG, Uchida M, Parkinson DY, McDermott G, and Larabell CA. "Visualizing sub-cellular organization using soft X-ray tomography," In: Comprehensive Biophysics, EH Egelman ed., Biophysical Techniques for Characterization of Cells Vol 2, P Schwille ed., Academic Press, Oxford England. 2012; pp. 90-110.
- Gu W, Pellegrino T, Parak WJ, Boudreau R, Le Gros MA, Alivisatos AP, Larabell CA. "Measuring Cell Motility Using Quantum Dot Probes," In: Quantum Dots: Applications in Biology, Methods in Molecular Biology Vol 374, C Hotz and M Bruchez eds., Humana Press. 2007; pp. 125-131
- Larabell CA. "Cell biology of polarity development in *Xenopus* oocytes and zygotes," In: Frontiers volume on Cell Polarity, D Drubin ed., Oxford University Press. 2000; pp. 181-196.
- Larabell CA. "Confocal microscopy of live *Xenopus* oocytes, eggs & embryos," In: Methods in Molecular Biol., Vol. 135: Dev. Biol. Protocols, Vol. I. R.S.Tuan & C.W. Lo (eds.) Humana Press, Inc., Totowa, NJ. 1991; pp. 175-182.
- LeLièvre S, Weaver VM, Larabell CA, and Bissell MJ. Extracellular matrix and nuclear matrix interactions may regulate apoptosis and tissue-specific gene expression: A concept whose time has come. In: Advances in Molecular & Cell Biology: Cell Structure & Signalling, RH Getzenberg ed., JAI Press Inc. 1997; 24, pp. 1-55.
- Capco DG and Larabell CA. "The cytoskeleton as an organizer of RNA and protein in early development," In: Progress in Molecular and Subcellular Biology, P Paine ed., Springer-Verlag. 1991; pp. 59-88.
- Larabell CA and Chandler DE. "The vitelline layer and fertilization envelope of echinoderm and amphibian eggs: Visualization of a cell surface-anchored extracellular matrix," In: Freeze Fracture Studies of Membranes. SW Hui ed., CRC Press, Inc. 1989; pp. 175-199.